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ABSTRACT

Little empirical study has been done on the efficacy of the variety of psychological approaches used to treat depression. The author reviews theoretical points of view: psychoanalytic, cognitive and behavioral, and constructs an experimental design to compare the relative effectiveness of cognitive therapy, assertiveness training and insight orientation. Thirty-three moderately depressed women subjects were pretested and completed six sessions according to the plan. Followup interviews indicated women in the assertive and cognitive groups felt better in mood, ability to cope, and relationships with others. Post treatment inventories showed no differential effect of the treatments. (SBP)

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Cognitive Therapy and Assertive Training in the Treatment of Depression in Women

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Although depression ranks as one of the most prevalent of clinical problems, affecting women in a ratio reported by some to be as high as two to one (Angst, 1972), to date little empirical study has been done on the efficacy of the variety of psychological approaches used to treat depression.

Depression has been psychologically conceptualized from several viewpoints. Three of these are the psychoanalytic, which for the most part views depression as the result of introjected hostility; the cognitive, which views depression as arising from irrational beliefs or the negative evaluative thoughts the depressed person continually repeats to him/herself; and the behavioral which views depression as a loss of reinforcement (Abraham, 1911; Beck, 1963; 1967; Freud, 1953; Lazarus, 1968; 1972). Each of these conceptualizations and the variants included in them have given rise to various treatments or recommendations for treatment.

The psychoanalytic tradition has emphasized emotional support, reassurance that depression is a self limiting problem, uncovering of the dynamics of precipitating situations and the seeking of alternate adjustments (Arieti, 1962; Gutheil, 1959; Campbell, 1953; Kraines, 1957). Cognitive therapists, although emphasizing the elements of support and empathy, recommend focusing more on the current, cognitive behavior of the client. For them, it is the cognitions which are giving rise to depression and hence the cognitions which need to be modified. Therapists such as Ellis (1961; 1962) and Beck (1967) recommend focusing on the irrational beliefs or negative statements

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that depressed persons are telling themselves, and then working with the client to challenge these statements and replace them with more rational, nondepressing ones. Whereas, Ellis focuses on uncovering the irrational beliefs upon which the statements are based and replacing irrational beliefs with more rational ones, Beck emphasizes more the changing of the particular negative self statement and the elucidation of various logical errors that the depressed person makes. Beck lists five logical errors that depressed persons frequently make. These are selective abstraction (focusing on one event out of many and drawing a conclusion on the basis of this one event), arbitrary inference (drawing a conclusion from events without sufficient data to warrant the conclusion), overgeneralization, magnification and minimization (magnifying aversive events and minimizing positive ones) and catastrophizing. Beck encourages the client to question his/her self statements, check them for logical errors and against known facts, refute inaccurate or invalid statements and substitute more rational, nondepressing producing ones. Few studies have been done testing the efficacy of cognitive therapy with depressed patients. Two case studies found RET to be effective in treating depression (Greene, 1973; Shapiro, Leufeld, and Post (1972). Unfortunately, RET was coupled with other treatments which makes its contribution to successful outcome difficult to assess. Beck (1967) reports success with his method in treating individual clients, but no data are available. Thus, few studies examining the effectiveness of cognitive therapy in treating depression exist.

Behavioral conceptualizations of depression have led to a variety of therapeutic interventions including thought stopping, pairing positive self statements with a high frequency event, social skills feedback, and

increasing activity level. Most of the research on the efficacy of these approaches has also been in case study reports showing the effectiveness of the various interventions (Johnson, 1971; Lewinsohn, Weinstein and Shaw, 1968; Lewinsohn, Weinstein, and Alper, 1970; Lewinsohn and Atwood, 1969; Lewinsohn and Shaffer, 1971; Mahoney, 1971; Todd, 1972; Wanderer, 1972). Often several treatments are combined as in the cognitive therapy studies. One behavioral approach of considerable interest is assertiveness training. Many clinicians have noted the nonassertiveness of their depressed clients (McCraine, 1971; Lazarus, 1972) and suggest that assertiveness training may be helpful in treating depression. Indeed, case studies by Lazarus (1968) have shown assertive training to be effective in treating depression. Maish (1972) used assertiveness training to effectively treat depressed inpatients. Little empirical investigation has been done of this promising therapeutic strategy. Assertiveness training could be expected to be an effective treatment for depression for several reasons. It should increase a persons social skills and thus enable a person to receive more positive reinforcement from others; it should give the person the skills necessary to stand up for their rights and hence increase the probability that they will be able to obtain more of what they want from others, and it should increase self esteem, a notable problem in depression, by giving the individual a greater sense of control over his/her life.

The purpose of the present study was to compare the relative effectiveness of cognitive therapy, based on Beck's (1967) suggestions, and assertiveness training with an insight oriented control group.

Method

Subjects

Thirty-three women from the Portland, Oregon, area served as subjects for this experiment. The women ranged in age from 21 years to 63 years. The mean age was 35.1 years. Twenty-one of the women were married, 6 were single, 5 were divorced, and one was widowed.

Instruments

The Beck Depression Inventory (BDI) was used to measure the depth of depression. The degree of irrational thinking was measured by the Personality Data Form - Part 1 (PDF-1). This latter scale, obtained from the Institute for Advanced Study in Rational Psychotherapy, was originally developed by Albert Ellis and later validated by Friedenheit. On both the BDI and PDF-1 titles of items or subscales were omitted from presentation. Assertiveness was measured by the Rathus assertiveness Schedule (RAS) (Rathus, 1973); and four tape recorded scenes requiring an assertive response. The assertiveness of these responses was rated on a five point rating scale by a man and a woman who both had B.A.'s in psychology. Additionally, standardized interviews were administered at pre, post and followup. Posttest and followup self rated improvement questionnaires and reference person questionnaires were also used to measure improvement.

Procedure

Advertisements were placed in various Portland area newspapers, advertising for women who had recurrent problems with depression and who would like to participate in a six week treatment group. When the women answered the advertisement, they were informed that the experimenter was a psychology intern and the groups were for her dissertation and treatment was free of charge. The women were then given a brief description of the

structure of the groups. They were told that the groups would meet for six weeks, that the first hour would be devoted to specific situations which could lead to depression and how to cope with them, and that the second hour would be devoted to individual work on the situations that were depressing to them. If the woman was interested, an individual interview was scheduled. All interviews were conducted by the author.

A standardized pretest interview was given, after when the subject was administered the BDI. If there was evidence of psychotic thinking, a level of depression less than 15 or greater than 31 on the BDI, or if the subject was considered currently suicidal, in therapy, or had assertive training, the experimental procedure was stopped and the experimenter spent the remainder of the hour discussing the person's current life situation and trying to find an appropriate referral for her.

For women whose problems with depression were recurrent and situationally related, who scored between 15 and 31 on the BDI, who were not psychotic, suicidal, in therapy, or had assertiveness training, the interview continued. The women were next administered the RAS, the PDF-1, and the taped assertive scenes. Their answers to the scenes were tape recorded. The women then signed a consent form. Next, the experimenter obtained the woman's schedule and told her that she would be contacted in a couple of weeks.

Interviewing continued over a period of eight weeks. At the end of four weeks, enough subjects were obtained to begin the first set of groups. This included an assertive, a cognitive, and an insight group. These groups were led by another female intern at the Veterans' Hospital in Portland, Oregon. The experimenter then interviewed women for another four weeks at which time she had enough subjects to start the second set of

three groups which were led by her.

The groups met for two hours a week for six weeks. At the first meeting, each group spent time getting acquainted and doing a warm up exercise consisting of introducing one another. Then the leader gave each group its rationale for treatment. Next each group was presented situations which could lead to depression. For the first group meeting, there were five situations constructed. However, all groups had time to cover only three. A situation was presented and the group members were asked if anything similar had happened to them. If something similar had occurred, the situation was modified to fit that person's experience. If no similar situation had occurred, members were asked to imagine themselves in that situation as vividly as possible. Members of all groups were then asked how they felt in that situation, what they thought, and what they would do. In the insight group, members went on to explore how they felt in the situation and why they felt that way. Past antecedents plus current factors in their reactions were explored. In the assertive group, members examined what they said in the situation, what kept them from being assertive, and went on to role play assertive responses to the situation. In the cognitive group, members examined what they told themselves in those situations, how what they said affected how they felt, and practiced substituting nondepressing cognitions.

For sessions two through six, the session was divided into two parts: situations and individual problems. The beginning ten minutes of the first hour were devoted to dealing with how people were feeling. Then each group was given an introduction for that session's situations. For the insight groups, these introductions centered around why exploring

feelings helped alleviate depression; for the assertive group they centered around why being assertive helped depression; and for the cognitive group why being more rational helped depression. The subjects were then presented situations which could lead to depression. The themes for these situations centered around hurt, anger, criticism, disappointment and positive feedback. Three situations were constructed for each week, but typically there was time for only two. A situation would be presented and subjects modified it so as to be close to something they had experienced. If that was not possible, then they imagined the situation as vividly as possible. Then, as with week 1, each group was asked how they felt in that situation, what they thought, and what they did. The insight group explored their feelings, the assertive group practiced assertive responses, and the cognitive group practiced identifying depressing cognitions and substituting nondepressing ones. The insight group spent sessions two through six, identifying their feelings, admitting their feelings to themselves, gaining insight into why they felt as they did, accepting their feelings, and experiencing how hearing positive feedback made them feel and why. The assertive group spent sessions two through six expressing their feelings, refusing unreasonable requests, telling people what they wanted, handling situations where their assertiveness was not accepted, and expressing positive feelings about themselves and others. The cognitive group spent their sessions focusing on each one of Beck's (1967) cognitive errors: arbitrary inference, selective abstraction, overgeneralization, inexact labelling, and magnification and minimization.

During sessions two through six, for the second half of each group meeting, group members broke into pairs and practiced applying what they

had learned the first hour to their own individual problems.

At the last session, an individual interview was scheduled for the following week. At that time, subjects were administered the posttest interview, BDI, RAS, PDF-1, assertive scenes, and a self rated improvement questionnaire. The name of a friend who could also rate their improvement was obtained an a reference person questionnaire was mailed to the friend. Subjects were then told they would be contacted in two months to see how they were doing. If the woman requested followup treatment, an effort was made to find an appropriate referral.

Eight weeks from the date of the posttest interview, subjects were contacted by phone and a followup interview was arranged. At the interview, the women were administered the followup interview, BDI, RAS, PDF-1, self rated improvement followup questionnaire, and assertive scenes. Additionally, a reference person followup questionnaire was sent out. [redacted]. If, at that time, the women wanted followup treatment, an appropriate referral was found.

Results

Of the women answering the announcement, 83 were scheduled for individual interviews. Of these, 54 appeared for their interviews and of these, 41 qualified and were assigned to a group. Eight Ss were dropped· six because they attended no meetings and two because they attended only one, leaving a total of thirty three subjects who completed the groups. There were ten in the assertive group (four in one group and six in another), eleven in the insight group (five in one group and six in another), and twelve in the cognitive group (nine in one group and three in another). All 33 women were interviewed individually at posttest and 32 were interviewed

two months later at followup. One of the women in the cognitive group had moved and was unavailable at followup. In addition to individual interviews, reference person questionnaires were returned for 10/12 women in the cognitive group, 9/11 women in the insight group, and 9/10 women in the assertive group at the posttest. At followup, only 5/11 reference person questionnaires were returned for the cognitive group, 6/11 for the insight group and 7/10 for the assertive group. These were not in sufficient number to be analyzed.

Results from the Initial Interview

Results from the initial interview revealed that the women most often described themselves as depressed, edgy, worried, tired and lonely. Half or more of the women in each group were depressed a majority of the time and their periods of depression lasted for weeks. The most frequently mentioned areas of difficulty were men, work, and friendships. When depressed, these women reported isolating themselves from others, feeling irritable, tired and unable to work. The majority of women in each group had had some previous therapy. A few in each group were on medication, mostly Valium. Only three women, one in the assertive group and two in the insight group were on antidepressant medication. Twenty seven percent of the women in the insight group, fifty percent of the women in the cognitive group and none of the women in the assertive group had attempted suicide.

Analysis of Pretest Scores

To determine the interrelationship of pretest scores and to see if there were significant differences between the three groups on pretest measures, results from the pretest measures were both intercorrelated and

submitted to a one way analysis of variance using a linear regression model (Daniel, C. and Wood, F., 1971). The intercorrelation matrix can be found in Table II.

The majority of significant correlations occurred between subscales of the Personality Data Form. Acceptance correlated significantly with frustration ($r = .429$; $p < .05$), achievement ($r = .604$; $p < .01$), worth ($r = .415$; $p < .05$), control ($r = .391$; $p < .05$), and catastrophizing ($r = .440$; $p < .05$). Frustration correlated significantly with worth ($r = .421$; $p < .05$) and catastrophizing ($r = .390$; $p < .05$). Injustice correlated significantly with control ($r = .382$; $p < .05$). Achievement correlated significantly with worth ($r = .435$; $p < .01$) and catastrophizing ($r = .377$; $p < .05$). Worth correlated significantly with catastrophizing ($r = .385$; $p < .05$). The total scale score correlated significantly with all the subscales except injustice and certainty. Certainty did not correlate significantly with any other subscale score.

The correlations between the Beck Depression Inventory and the total Personality Data Form score approached ($r = .34$) but failed to reach significance. Depression did correlate significantly with the Personality Data Form subscales of Achievement ($r = .426$; $p < .05$) and Worth ($r = .472$; $p < .01$). The more depressed the woman, the more irrational she was about her achievement and worth (or vice versa).

The correlation between assertiveness as measured by the Rathus Assertiveness Schedule and depression was in the predicted direction ($r = -.327$), but just failed to reach significance. Assertiveness did correlate significantly with Achievement ($r = -.389$; $p < .05$), worth ($r = -.445$; $p < .05$), and catastrophizing ($r = -.401$; $p < .05$). Hence the

more nonassertive the woman, the more irrational she was about achievement and her worth and the more catastrophizing she did.

Pre and post assertiveness scene scores were randomized, retaped and rated by two raters for the degree of nonassertiveness. [redacted]. A Pearson product moment correlation revealed an interrater reliability of .98. Pretest scene scores did not correlate significantly with any other measure.

The analysis of variance of pretest scores, revealed significant differences between groups on: subscale 2, Frustration, of the Personality Data Form ($F_{2,29} = 5.68$; $p < .01$), subscale 5, Worth, ($F_{2,29} = 3.54$; $p < .05$), and total score ($F_{2,29} = 3.60$; $p < .05$). The insight group scored significantly less irrational over frustrating events than did the cognitive ($t_{29} = 2.47$; $p < .01$) or the assertive group ($t_{29} = 3.22$; $p < .005$). Additionally, the insight group had fewer worries over feelings of worthlessness than did the cognitive ($t_{29} = 2.51$; $p < .05$) or assertive group ($t_{29} = 2.02$; $p < .05$). Finally, the insight group scored more rational than the cognitive ($t_{29} = 2.41$; $p < .025$) or assertive groups ($t_{29} = 2.36$; $p < .025$).

Results From the Posttest Interviews

Results from the posttest interviews showed the following percentages of women reporting improvement in affect, ability to cope, relationships with others, feelings regarding themselves, increased energy and ability to work:

Category	Group		
	Insight	Assertive	Cognitive
Affect	36% (4/11)	90% (9/10)	83% (10/12)
Coping	27% (3/11)	90% (9/10)	75% (9/12)
Relationships	36% (4/11)	80% (8/10)	67% (9/12)
Self	45% (5/11)	80% (8/10)	58% (7/12)
Energy	9% (1/11)	40% (4/10)	25% (3/12)
Work	36% (4/11)	20% (2/10)	25% (3/12)

The majority of women in the assertive and cognitive groups reported improvement in mood, feelings of coping and relationships with others. More than half the women in each of these groups reported feeling better about themselves. Fewer people in the insight group reported such improvements. Additionally, the greatest percentage of women reporting feeling worse was in the insight group (N = 4; 36%). Only one woman in the cognitive group and no women in the assertive group reported feeling worse.

The insight, assertive, and cognitive groups averaged 8.5, 7.6, and 7.4 hours of sleep a night respectively. Nine women in each of the groups fell asleep in minutes. Three in the insight and two in the cognitive group and one woman in the assertive group took over an hour to fall asleep. One woman in each group reported early morning wakening. Half of the women in the insight and cognitive groups had significant stressful events occur to them while in the group. Only two women in the assertive group had significant events occur to them.

When asked how the group could have been improved, a large percentage of each of the groups were uncertain as to what could be done to make the groups more effective. Some felt longer groups, some felt groups which developed a greater degree of intimacy, and others felt groups with different people would be more effective.

When asked what the most significant events in the group were for them,

the cognitive and insight groups stated a feeling of universality (knowing not alone) and, for the cognitive group, sharing were the most significant factors in the group experience. For the assertive group members, the information was the most important factor.

Results From the Posttest Measures

Results from the posttest measures where there were no significant pretest differences, were submitted to a one way analysis of variance using a linear regression model. Where there were significant pretest differences, a one way analysis of variance on adjusted means using a multiple linear regression model was done (Daniel, C. and Wood, F., 1971). Results showed significant differences between groups at posttest on subscale 1, Acceptance, of the Personality Data Form ($F_{2,29} = 5.68$; $p < .05$). Newman - Keuls test on differences between means showed that the insight and assertive groups made significantly more gains in rationality surrounding self acceptance than the cognitive groups. Values for the posttest ANOVAs can be found in Table II.

Tests for significant differences between pretest and posttest means using a multiple linear regression model (Daniel, C. and Wood, F,, 1971) showed significant change for all three groups in depression ($t_{29} = 8.23$; $p < .001$), Frustration ($t_{29} = 4.83$; $p < .001$), Achievement ($t_{29} = 2.64$; $p < .05$), Worth ($t_{29} = 4.54$; $p < .001$), Control ($t_{29} = 4.31$; $p < .001$), Catastrophizing ($t_{29} = 3.66$; $p < .001$), Irrationality (total Personality Data Form score) ($t_{29} = 5.66$; $p < .001$), and assertiveness as measured by the Rathus Assertiveness Schedule ($t_{29} = 3.67$; $p < .001$). These values can be found in Table II. Graphs of pretest, posttest and followup means for the three groups on depression can be found in Figures 1 [illegible]. For

variables where pretest differences were significant, adjusted means are presented. All three groups became significantly less depressed, less irrational over frustrating events, self worth, achievement, and control, less catastrophic in their thinking, less irrational overall, and more assertive. Except for the variable of acceptance, there were no differential effects for the treatments.

No significant differences pre to post were found on the self report or reference person questionnaires.

Results From Followup Interviews

At the followup interviews, the following women reported improvement, in affect, ability to cope, relationships with others and improved feelings about themselves:

Category	Group		
	Insight	Assertive	Cognitive
Affect	54% (6/11)	90% (9/10)	63% (7/11)
Coping	81% (9/11)	100% (10/10)	81% (9/11)
Relationships	63% (7/11)	90% (9/10)	72% (8/11)
Self	63% (7/11)	70% (7/10)	63% (7/11)

The greatest self report of improvement came from women in the assertive group. Once again the insight group showed less improvement but more than at the posttest. The insight group and cognitive group were now approximately equal in self reports of improvement.

The following percentages of women reported feeling worse, being less able to cope, having less satisfactory relationships with others and feeling worse about themselves:

Category	Group		
	Insight	Assertive	Cognitive
Affect	18% (2/11)	0%	27% (3/11)
Cope	18% (2/11)	0%	18% (3/11)
Relationships	9% (1/11)	0%	9% (1/11)
Self	27% (3/11)	0%	9% (1/11)

Again, no women in the assertive group reported that they were now feeling worse or coping less. The insight group still had a few people who felt they were worse and at followup, they were joined by more people in the cognitive group who felt they were doing worse.

When asked if they had had any stressful event occur in their lives since the end of the group, twenty seven percent of the insight group, eighteen percent of the cognitive group, and ten percent of the assertive group had either illness or death occur in their family since the end of the group.

When inquiries were made concerning sleep distrubance, three women in the assertive group, four women in the cognitive group, and one woman in the insight group reported either taking longer than one hour to fall asleep or early morning wakening.

When asked if they had sought additional help since the end of the group, 45% of the women in the insight group had gone for additional counseling and 9% had begun medication. Eighteen percent of the women in the cognitive group had gone for additional therapy and none of the women in the assertive group had sought additional help.

Results From Followup Measures

Responses to the taped scenes at followup were randomized, retaped and rated by the same raters as before. A Pearson product moment correlation showed an interrater reliability of .93.

Where there were significant pretest differences, followup scores were submitted to a one way analysis of variance adjusted for pretest differences using a multiple linear regression model (Daniel, C. and Wood, F., 1971). Results revealed significant followup differences between groups on Frustration ($F_{2,29} = 3.34$; $p < .05$), Worth ($F_{2,29} = 4.91$; $p < .05$), and Assertiveness as measured by the Rathus Assertiveness Schedule ($F_{2,29} = 4.69$; $p < .05$). These values are given in Table II. The assertive group showed less frustration at followup than either the cognitive or insight groups ($t_{29} = 2.57$; $p < .05$). The assertive groups showed a greater increase in rationality regarding self worth than the cognitive or insight groups ($t_{29} = 2.28$; $p < .05$). The assertive and insight groups continued to become more assertive and showed greater gains in assertiveness than the cognitive group ($t_{29} = 2.82$; $p < .01$).

Prediction of Change

In order to determine if there were any variables that differentiated high changers in depression from low changers at posttest, each group was divided into high and low changers based on cutoff points derived over all subjects. Cutoff score for high changers in depression was 14 points decrease, cutoff score for medium change was 5 points decrease, and cutoff point for low changers was a 2 points decrease in depression score.

The following percentages of women fell in each group of changers:

Change	Group		
	Insight	Assertive	Cognitive
High 14 pts +	27% (3/11)	60% (6/10)	41% (5/12)
Medium 5 pts +	45% (5/11)	30% (3/10)	41% (//12)
Low 4 pts to 2 pts gain	27% (3/11)	10% (1/10)	17% (2/12)

The greatest number of high changers and fewest number of low changers occurred in the assertive group. The assertive group was followed by the cognitive group which was fairly evenly divided between high and medium changers with only a few low changers. The insight group had the smallest number of high changers and the same number of low changers as high changers. Approximately half of the insight group were medium changers.

In order to try to find differences or similarities which might account for high or low change in depression score, various demographic variables were examined. No consistent differences between the high and low changers over treatment groups were found with regard to the variables of marital status, mean age, number working, number of sessions attended, initial depression score, percentage having made suicide attempts, onset of depression, percentage of women constantly depressed, percentage having children or previous therapy. This data can be found in Table III.

In order to determine what relationship change in depression might have to other variables, change scores on the Beck Depression Inventory, Rathus Assertiveness Schedule, Personality Data Form, as well as initial depression, assertiveness, and irrationality score were intercorrelated. Change in depression correlated significantly with change on the Personality Data Form ($r = .798$; $p < .01$) and change on the Rathus Assertiveness Schedule ($r = -.615$; $p < .01$) but not with initial depression, assertiveness or irrationality score. Change on the Personality Data Form correlated significantly with change on the Rathus Assertiveness Schedule ($r = -.643$; $p < .01$) and initial score ($r = -.54$; $p < .01$). Change on the Rathus Assertiveness Schedule correlated with initial score ($r = -.436$; $p < .05$).

In order to determine how initial differences in rationality may have

affected the change distribution outcome, it was hypothesized that since change in depression was significantly correlated with change in rationality, perhaps the insight group had fewer high changers in depression because of a fewer number of highly irrational people. In order to test this hypothesis, and to determine what affect different initial scores in assertiveness, rationality and depression may have had in relationship to change category, a three (change category) by three (treatment group assignment) analysis of variance was done with initial assertiveness score, initial rationality score, and initial depression score was done. In addition, to determine what similarities the high changers might have had with regard to change in assertiveness and rationality, a three (change category) by three (treatment group) analysis of variance with change in rationality and assertiveness as the dependent variables was done.

Results showed no significant interaction between change category and treatment group assignment for either initial depression, assertiveness, or rationality score or change in assertiveness score or change in rationality score. There were no main effects for change classification on the dependent variables of initial depression, initial assertiveness, and initial irrationality. Hence, there were no significant differences on these three variables between high, medium, and low changers. There were significant differences between high, medium, and low changers in the degree of change in assertiveness ($F_{2,29} = 8.53$; $p < .005$) and irrationality ($F_{2,29} = 9.09$; $p < .001$). A Newman Keuls test for significant differences between means (Winer, 1971) showed that high change women in depression changed significantly more in both assertiveness and rationality than did low change in depression women. Additionally, medium change in depression

women changed significantly more in both assertiveness and rationality than did low change women in depression. There were no significant differences between high and medium change women in either assertiveness or rationality.

Discussion

Given the duration, pattern, and symptomatology reported during the initial interviews, the subjects were seen as representative of women who present themselves for help at mental health clinics. The women were moderately depressed, had had difficulty with depression since around their teens, and, for the most part, their depression centered around their relationships with others, particularly men, and their jobs. When depressed these women tended to isolate themselves from others, feel tired, sad, irritable and unable to work. None of the women reported periods of elation, few evidenced sleep disturbances, and varying numbers had attempted suicide or had made suicidal gestures. None were currently suicidal.

Due to difficulties in matching clients' schedules to therapists' schedules, random assignment to groups was not possible. Women were assigned to available group times and then the treatment approach was randomly assigned to the group. There were no reasons to believe the groups differed significantly from one another. However, when pretest analyses were done some initial differences were found. The insight group appeared more rational about frustrating events and self worth, and scored more rational overall. These differences were controlled for statistically in posttest analyses.

It was predicted that nonassertiveness and irrationality would be correlated with the degree of depression. Although the correlations were

in the predicted direction, they failed to reach significance. However, two subscales, achievement and worth, of the Personality Data Form did correlate significantly with the degree of depression. This leads to an interesting hypothesis regarding irrationality and depression. In accordance with Ellis' belief that irrationality produces pathology, the Personality Data Form was designed to measure general irrationality. It could be that depression in women is correlated with specific areas of irrationality and not with irrationality in general. This would account for depression correlating significantly with only the achievement and worth subscales of the Personality Data Form and not with the total irrationality score.

Worth has long been noted as a key area for depressed people. Despite apparent success, the depressed person maintains that she/he is a failure, worthless, or no good (Beck, 1967). Clinicians have long puzzled over the contradiction between objectively adequate performance and the depressed person's evaluation of failure. It could be that women who become depressed are women who set very high expectations for themselves and equate their self worth with their ability to match those very high expectations. In addition, in their evaluation process they may tend to be irrational e.g., "Since I wasn't able to do it like I should have (perfectly), I didn't accomplish anything. I'm not able to do anything right." In this way, the woman could be achieving in other's opinions but still evaluate herself as a failure. Thus self worth and achievement become highly correlated. In evaluating herself as a failure, the woman may become depressed, thus accounting for the significant correlation between depression, achievement and worth.

Further investigation is needed to determine the exact nature of the

relationship between irrationality regarding achievement and worth and depression. In addition, further research is needed to clarify the hypothesis that depressed women are irrational only with regard to certain areas and not others. The assessment of the areas of irrationality relevant to depression and the development of an adequate method of measuring them would be extremely useful in assessing change and in perhaps developing a more effective cognitive treatment.

The subscales of Worth and Achievement also correlated significantly with the degree of nonassertiveness as measured by the Rathus Assertiveness Schedule. Thus, women who were critical of their performances, tended to feel ashamed over failures, and evaluate themselves as stupid tended to be more depressed and more nonassertive. Perhaps women who are irrational with regard to their achievements and worth tend to be more depressed and lack the energy to be assertive. Additionally, in order to be assertive a woman needs to feel that one, she has something worth saying and two, if others disagree or disapprove, it's all right, she still has a right to her own opinion. Women who are worried over achievement and worth may not take as many interpersonal risks to assert themselves; one, because of the fear of not performing well, or two, because they do not feel that their ideas are worth expression.

Nonassertiveness also correlated significantly with the catastrophizing subscale of the Personality Data Form. The catastrophizing subscale measures the degree to which the person feels fear over some low probability, vague, or strange event occurring to them. People who are nonassertive do not straightforwardly express their beliefs or expectations regarding others feelings or behavior and thus limit the amount of validation they receive

regarding their beliefs. In the absence of much validation, these beliefs may become more extreme and they may limit the woman's willingness to assert herself.

At posttest, after six weeks of treatment, all three groups showed highly significant decreases in depression, irrationality and nonassertiveness as measured by the Rathus. Additionally, there were significant decreases for all three groups in the frustration , achievement, worth, control and catastrophizing subscales of the Personality Data Form. There were no differential effects for the different treatment groups in these variables.

The only variable showing a differential effect for treatment was the acceptance subscale of the Personality Data Form. Both the insight and assertive groups made more gains than the cognitive group on this subscale. This subscale seems to measure the presence of the irrational belief, It's a terrible thing if other people do not approve of me, or like me . It measures reactions of humiliation, hurt, and uncomfortableness over the possibility that others might not approve. Both the insight groups and assertive groups spent more time dealing with their reactions to others feelings or actions. The insight group reflected on how they felt over other's opinions and why, while the assertive group, in order to become more assertive, had to reach a decision over the question, what if someone doesn't like what I do or say?' . The cognitive group, however, focused more on their own self evaluations and modifying what they told themselves about themselves. Perhaps the effectiveness of this group could be increased by focusing on what they tell themselves about other's evaluations.

The lack of a differential effect for treatments may be a result of a variety of factors. Due to the high degree of error variance, any difference due to treatments would have to be extremely large to show up as significant. Differences between groups on initial pretest measures were controlled for statistically. However, there were other, nonmeasured differences among subjects that added to the error variance. In looking at the interview data, it can be seen that fewer women in the assertive group were constantly depressed, more were depressed on a day to day basis. Where some women in each of the insight group (27%) and the cognitive group (50%) had attempted suicide, none in the assertive group had. Thus, there was variability within subjects even though overall they scored as depressed, nonassertive, or irrational as each other. Additionally, the interviewer was impressed with differences between women in their ability or willingness to correlate their moods with specific situations or events and the degree to which their depression seemed to be related to environmental conditions such as an alcoholic husband or financial difficulty or more internal variables such as high self expectations or self criticalness. The degree to which other variables affecting the degree of depression are not assessed or controlled, the chance of demonstrating significant treatment differences is reduced. Greater specification and measurement of such variables as the depth, length, duration, and seriousness of the consequences of the depression in the past, as well as, the relatedness to situational and/or internal evaluative processes needs to be done.

In addition to uncontrolled differences between subjects, differences between treatments can also be masked by the presence of other variables acting across all groups to increase successful outcome. Such variables as

warmth, genuiness, and empathy of the leader, cohesiveness, support, and sharing among group members, and a feeling of acceptance or caring within the group may act across all groups to produce a successful outcome. The extent to which these factors are curative and present across groups, treatment differences will be masked.

Also, the extent to which assertiveness and irrationality are correlated and change in one produces, or leads to, change in the other, treatment differences will not be as apparent. Thus, in becoming more assertive, a woman may have to give up or refute such irrationalities as 'I never have anything worthwhile to say' or "No one cares what I think' or "Something terrible would happen if I told them what I really think" and replace them with more rational self statements. Conversely, in becoming more rational, a woman may become less worried over others opinions or less self critical which may lead her to become more assertive.

Expertise of the group leaders, the extent to which a woman's depression may be arising from irrational ideas, nonassertiveness, or a lack of insight into the situations which are upsetting to her, the degree to which a woman feels comfortable in a group therapy setting, and the extent to which six weeks is an adequate amount of time for the treatment to be effective, differences between approaches will be difficult to demonstrate.

While the posttreatment inventories and self rated improvement questionnaires show no differential effect of the treatments, the interviews do show some differences. Where as the majority of women in the assertive and cognitive groups felt better in mood, ability to cope, and relationships with others, less than half felt so in the insight group. Also, women in the

assertive and cognitive groups reported feeling better about themselves and having more energy than the women in the insight groups. The greatest percentage of women reporting feeling worse occurred in the insight group (36%). The insight group appeared to have the greatest variability in treatment outcome, with more women seeking additional therapy.

If the percentage of women exhibiting high (14 points to 23 points), medium (11 to 5 points), and low (2 points decrease to 2 points increase) amounts of change in depression are compared across groups, it can be seen that the cognitive and assertive groups have a high percentage of high (41% and 60% respectively) changers, a high to moderate percentage of medium changers (41% and 30% respectively) and a low percentage of low changers (17% and 10% respectively). The insight group, in comparison, had a few high changers (27%), a high number of medium changers (45%) and some low changers (27%). The latter results are in accord with previous studies in traditional psychotherapy which show that psychotherapy produces increased variability with some clients becoming worse and some becoming better with the extremes tending to cancel each other out (Bergin, 1967; Truax, 1964). In relation to these observations, the more traditional insight oriented treatment group behaved quite similarly while the more directive or behaviorally specific oriented modes of therapy appeared to produce a more positively skewed distribution of therapy outcome. These results are interesting and suggest looking not only at mean change for outcome differences but also at the degree of high and low changers. Due to initial differences between groups on some measures, extreme caution must be exercised in interpreting these results. Suggestive of the fact that these differences may be due to treatment effects, is the fact that no significant

differences were found between high, medium, and low changers in initial depression, assertiveness, or rationality score. Future research which is better able to control initial differences may lead to a better understanding of the effects of treatments on the distribution of change scores within and between groups.

The hypothesis that treating irrationality and/or assertiveness would be helpful in alleviating depression received some support from the significant correlations between change in depression and change in rationality and assertiveness. Additional support came from the finding that high change women in depression changed significantly more than low change women in depression on the variables of rationality and assertiveness. Also, medium change women in depression changed significantly more in rationality and assertiveness than low change women in depression.

At followup, there were more significant differences between groups with the assertive groups sharing the greatest gains. These differences were found in the frustration and worth subscales of the Personality Data Form and in the Rathus Assertiveness Schedule. The assertive group had fewer frustrating or unpleasant feelings at times when events, others, or themselves did not behave as they wished. Additionally, they had fewer thoughts over being stupid, worthless, guilty or their life being hopeless or meaningless, than did members of either the cognitive or insight groups. Both the assertive and insight groups continued to become more assertive at followup than the cognitive group.

This continuation to make gains can be explained in several ways. For the assertive group, learning a technique for coping could have led to the establishment of a beneficial cycle where successfully being assertive

led to more interpersonal success and a feeling of being able to cope with situations. This in turn could have led to greater assertiveness and self confidence. Additionally, within the assertive training format, the women worked on becoming more assertive within current distressing situations with which they were involved in a day to day basis. Successfully, learning to cope in these situations involved learning to deal more effectively with significant others in their lives. In this case, the reinforcement for continued change and improvement lies outside the group and within the environmental context. This may account for the continued improvement in this group.

For the insight group, more women (45%; N = 5) sought additional help at the end of the group. At followup, the insight group showed a continuing decrease in depression (Figure 1) while the assertive and cognitive groups appear to remain the same. This continued change can perhaps be accounted for by the greater number of women in the insight group who continued in therapy. These women account for all but one of the women who showed a decrease in depression at followup.

When followup interview data are considered, it can be seen that an extremely high percentage of the women in the assertive group felt improved in mood, ability to cope, and relationships with others. There was some decrease in the gains made by the cognitive group, although the majority still felt improvement in all three areas. The insight group showed more women reporting improvement at followup than at posttest. Again, these latter changes can be accounted for by those who sought additional help.

As for reports of decreased ability to function, the insight

group still showed some people feeling worse, coping poorer and feeling worse about themselves. At followup, they were joined by more people in the cognitive group who felt worse. No one in the assertive group reported feeling worse. Those who did not report feeling better, reported feeling about the same as at posttest.

In conclusion, the hypothesized relationship between nonassertiveness, irrationality and depression failed to reach significance. Depression did correlate significantly with irrationality in the specific areas of achievement and worth, leading to the hypothesis that depressed women may be irrational only with regard to particular areas or beliefs. In general, statistically significant differences between treatments failed to charge. All groups improved significantly over most variables with six weeks of treatment. Self report measures indicated some differential effectiveness of treatments with more women in the assertive and cognitive groups reporting feeling better and feeling more able to cope. The great variability within subjects decreased the probability of demonstrating significant treatment results. It is suggested that in future research, the nature of the depression problem, the irrationalities present and treated, and other variables which may effect outcome such as group cohesiveness be better defined, measured, and controlled.

Footnote

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TABLE I

INTERCORRELATIONS AMONG PRETEST SCORES

Variable	2	3	4	5	6	7	8	9	10	11	12
(1) Beck Depression Inventory	.149	.112	.239	.426*	.472**	-.025	.255	.216	.342	-.327	.010
(2) PDF - Acceptance		.429*	.173	.604**	.415*	.391*	.054	.440*	.794**	-.138	.064
(3) PDF - Frustration			.059	.319	.421*	.327	.287	.390*	.755**	-.035	-.005
(4) PDF - Injustice				.024	.221	.382*	.107	-.064	.317	.026	-.265
(5) PDF - Achievement					.485**	.281	.297	.377*	.682**	-.389*	-.115
(6) PDF - Worth						.082	.071	.385*	.688**	-.445*	-.006
(7) PDF - Control							.201	.013	.516**	.050	-.138
(8) PDF - Certainty								.069	.327	-.093	-.144
(9) PDF - Catastrophizing									.571**	-.401*	.281
(10) PDF - Total Score										-.276	-.022
(11) Rathus Assertiveness Schedule											-.298
(12) Assertive Scene Score											—

** $p < .01$, $r = .449$
* $p < .05$; $r = .349$

TABLE II

F AND T VALUES FOR PRETEST, POSTTEST AND FOLLOWUP ANALYSES

Variable	Pretest F	Posttest F	T Score	Followup F
1. Depression - BDI	.62	.81	8.23***	.76
2. Acceptance - PDF	.21	5.52*	7.23***	2.45
3. Frustration - PDF	5.68**	1.12	4.83***	3.34*
4. Injustice - PDF	1.00	.08	1.06	1.10
5. A chievement - PDF	.54	.84	2.64*	.26
6. Worth - PDF	3.54*	2.26	4.54***	4.91*
7. Control - PDF	.51	.88	4.31***	.13
8. Certainty - PDF	.23	.09	1.51	1.04
9. Catastrophizing	1.02	.45	3.66***	.48
10. Total PDF Score - Irrationality	3.80*	1.56	5.66***	.39
11. Rathus Assertiveness Schedule	.88	1.90	3.67***	2.46
12. Assertive Scenes	.92	.24	1.98	2.25
13. Self Rated Post Group Depression		1.48		1.35
14. Self Rated Improvement		.06		.36
15. Self Rated Group Effectiveness		.87		.31
16. Self Rated Group Helpfulness		2.23		
17. Self Rated Satisfaction		.65		.11
18. Friend Rated Depression		.07		
19. Friend Rated Improvement		.65		
20. Friend Rated Effectiveness		.06		

***p < .001; **p < .01; *p < .05

TABLE III

PERCENTAGE OF HIGH AND LOW CHANGERS IN THE COGNITIVE (C), ASSERTIVE (A), AND INSIGHT (I) GROUPS FALLING INTO SELECTED CATEGORIES

Change Classification	Category															
	% Married			Mean Age			% Working			Number Sessions Attended			% of Suicide Attempters			
	C	A	I	C	A	I	C	A	I	C	A	I	C	A	I	
High Change Depression	40%	20%	67%	35	30.8	35.6	80%	100%	0%	5.6	5.4	5.0	40%	0%	33.3%	
Low Change Depression	0%	50%	100%	37	44	36.3	67%	50%	0%	5.6	5.5	4.3	60%	0%	0%	

Change Classification	Category															
	% Having First Episode Age 20 or Before			% of Women Constantly Depressed			% Having Children			% Having Previous Therapy						
	C	A	I	C	A	I	C	A	I	C	A	I				
High Change Depression	80%	100%	67%	40%	20%	33%	20%	60%	100%	80%	60%	33%				
Low Change Depression	67%	67%	67%	67%	0%	67%	0%	50%	100%	67%	50%	100%				

TABLE IV

INTERCORRELATION OF CHANGE SCORES AND INITIAL SCORES

Variable		2	3	4	5	6
(1) Change on Beck Depression Inventory	—	.798	-.615	-.104	-.223	.159
(2) Change on Personality Data Form			-.643	-.273	-.543	.214
(3) Change on Rathus Assertiveness Schedule				.166	.211	-.436
(4) Initial Beck Depression Score					.342	-.327
(5) Initial Personality Data Form Score						-.276
(6) Initial Rathus Assertiveness Score						—

**p .01
* p .05

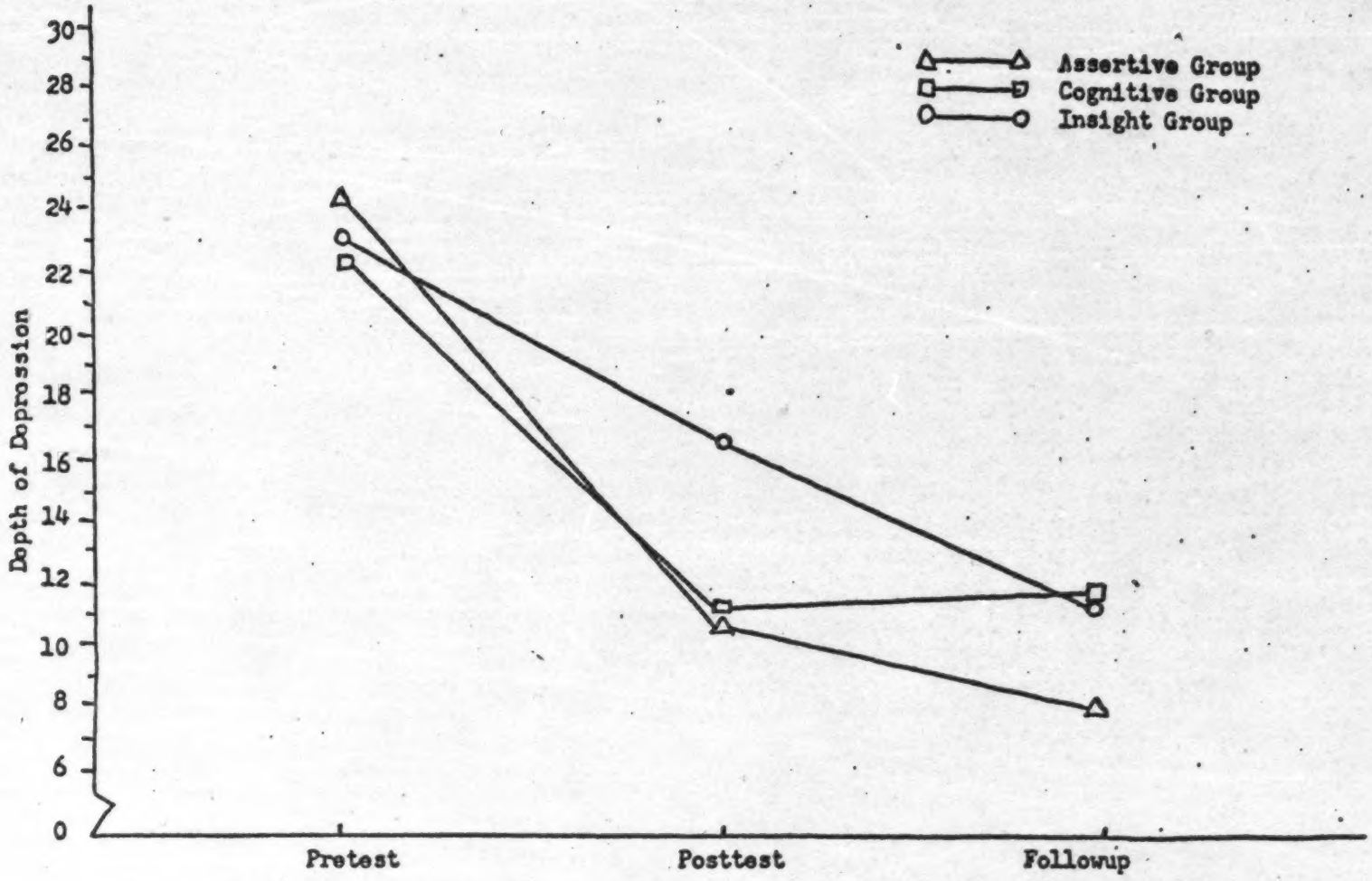

Figure 1. Beck Depression Inventory means for the three groups at pretest, posttest, and followup.